

Fig. 5. Sequences corresponding to GenBank Accession Nos. shown in Table III (sequences shown in Fig. 5 correspond to SEQ ID NOS:44-52 and SEQ ID NOS:1-43, respectively. Sequences shown in Table III correspond to SEQ ID NOS:37, 34, 11, 4, 52, 51, 50, 49, 43, 42, 41, 40, 38, 36, 35, 33, 44, 32, 31, 20, 16, 15, 14, 13, 12, 10, 19, 9, 8, 7, 6, 5, 18, 3, 2, 1, 17, 30, 22, 21, 46, 45, 21, 29, 28, 48, 27, 47, 26, 25, 24, respectively).

REMARKS

Reconsideration of this application and entry of the foregoing amendments are respectfully requested.

The specification has been amended to make proper reference, in the description of Figure 5, to the sequence identifiers corresponding to the sequences shown in Figure 5 and in Table III. The undersigned sincerely regrets the confusion resulting from the error made in the Amendment of December 21, 2000 where, in the description of Fig. 5, reference was improperly made to SEQ ID NOS:10-52 and 1-9. For the Examiner's ease of reference, submitted herewith is a copy of Fig. 5 hand-amended to show the sequence identifiers. The hand-amended version also highlights the name given each sequence, which names are referred to in the claims. The undersigned believes that

from a review of the hand-amended version of Fig. 5, it will be clear that DDRT2 in claim 5 is indeed SEQ ID NO:34.

In response to the Examiner's requirement for restriction, Applicants elect the subject matter of Group III (claims 7, 11 and 15) for prosecution in this application. The election is made with traverse. The Examiner is requested to rejoin Groups I, II, III and IV for the reasons that follow.

As pointed out in the Amendment filed July 19, 2001, DDRT2 (SEQ ID NO:34), DDRT7 (SEQ ID NO:50), DDRT16 (SEQ ID NO:40) and DDRT26 (SEQ ID NO:14) are differentially expressed cDNAs derived from the same gene, F35E811 (see paragraph bridging pages 4 and 5 of July 19, 2001 Amendment). That being the case, no basis for restriction as between Groups I-IV is seen.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "**Version With Markings To Show Changes Made.**"

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning at page 7, line 2:

Fig. 5. Sequences corresponding to GenBank Accession Nos. shown in Table III [(SEQ ID NOS:10-52 and 1-9, respectively)] sequences shown in Fig. 5 correspond to SEQ ID NOS:44-52 and SEQ ID NOS:1-43, respectively. Sequences shown in Table III correspond to SEQ ID NOS:37, 34, 11, 4, 52, 51, 50, 49, 43, 42, 41, 40, 38, 36, 35, 33, 44, 32, 31, 20, 16, 15, 14, 13, 12, 10, 19, 9, 8, 7, 6, 5, 18, 3, 2, 1, 17, 30, 22, 21, 46, 45, 21, 29, 28, 48, 27, 47, 26, 25, 24, respectively).

Figure 5

1
LOCUS AF072438 284 bp mRNA EST 06-JUL-1998
DEFINITION AF072438 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT21, mRNA sequence.
ACCESSION AF072438
NID g3288944
KEYWORDS EST.
SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 284)
AUTHORS Freedman, J.H. and Liao, H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
COMMENT
Contact: Jonathan H. Freedman
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Email: jonf@duke.edu.

FEATURES Location/Qualifiers
source 1..284
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT21"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 88 a 61 c 54 g 81 t

ORIGIN

1 ttgtactcca cacggacaaa tacattagt ttacaagcc gccacgcgac acgcaacggc
61 cgtaaatcta cccaaggtac aacaactaca tgtaagcac agacccarat cttattgtg
121 cggaaggatg gcctctactg tagtaatcga caattggact cttatccacc ggatcaccta
181 acctatttg atattaatat gcctgattgg ggcacacagg gttgcccgaa aaatgtaatt
241 atgaactgaa ttcgaaatgt attataaat tagttttat tggg

//

SEQ ID NO: 44

2
LOCUS AF072437 214 bp mRNA EST 06-JUL-1998
DEFINITION AF072437 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone VL8, mRNA sequence.
ACCESSION AF072437
NID g3288943
KEYWORDS EST.
SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 214)
AUTHORS Freedman, J.H. and Liao, H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by

differential display
 JOURNAL Unpublished (1998)
 COMMENT
 Contact: Jonathan H. Freedman
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FEATURES Location/Qualifiers
 source 1..214
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL8"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 68 a 37 c 66 g 43 t

ORIGIN

1 gcaagtgcgg agacaaatgt gaatgcagtg gagacaagtg ttgtgagaag tactgctgrg
 61 aggaggccag tgagaaaaaa tctgtgccag ctggatgtaa gggagactgc aagtgtgcaa
 121 actgtcattg tgcagagcag aagcagtgcg agacaagacc catcaacacc aggggaactgc
 181 tgcggctcat taaaatggtt cagagttgaa tcta

//

SEQ ID NO: 45

3 LOCUS AF072436 217 bp mRNA EST 06-JUL-1998
 DEFINITION AF072436 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL7, mRNA sequence.

ACCESSION AF072436

NID g3288942

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 217)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by
 differential display

JOURNAL Unpublished (1998)

COMMENT

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 Email: jonf@duke.edu.

FEATURES Location/Qualifiers
 source 1..217
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL7"
 /clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"
 /dev_stage="mixed population"
 BASE COUNT 69 a 37 c 66 g 45 t
 ORIGIN

1 tttagcaagtgc cggagacaaa tgtgaatgca gtggagacaa gtgtgtgag aagtactgct
 61 gtgaggaggc cagttagaaa aaatgctgtc cagctggatg taaggagac tgaagtgtg
 121 caaactgtca ttgtcagag cagaagcagt gcgagacaag acccatcaac accagggaac
 181 tgctgcggct cattaaaatg ttcagagtt gaatcta

//

SEQ ID NO: 46

4 LOCUS AF072435 217 bp mRNA EST 06-JUL-1998
 DEFINITION AF072435 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL15, mRNA sequence.
 ACCESSION AF072435
 NID g3288941
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 217)
 AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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 JOURNAL Unpublished (1998)
 COMMENT

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FEATURES Location/Qualifiers
 source 1..217
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL15"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 69 a 37 c 66 g 45 t
 ORIGIN

1 tttagcaagtgc cggagacaaa tgtgaatgca gtggagacaa gtgtgtgag aagtactgct
 61 gtgaggaggc cagttagaaa aaatgctgtc cagctggatg taaggagac tgaagtgtg
 121 caaactgtca ttgtcagag cagaagcagt gcgagacaag acccatcaac accagggaac
 181 tgctgcggct cattaaaatg ttcagagtt gaatcta

//

SEQ ID NO: 47

5 LOCUS AF072434 216 bp mRNA EST 06-JUL-1998
 DEFINITION AF072434 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL12, mRNA sequence.
 ACCESSION AF072434
 NID g3288940

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 216)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..216
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="VL12"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 69 a 37 c 66 g 44 t

ORIGIN

1 tagcaagtgc ggagacaaat gtgaatgcag tggagacaag tttgtgaga agtactgctg
61 tgaggaggcc agtgagaaaa aatgctgtcc agctggatgt aagggagact gcaagtgtgc
121 aaactgtcat tgtgcagagc agaagcagtg cgagacaaga cccatcaaca ccagggaact
181 gctgcggctc attaaaatgt ttacagattg aatcta

//

SEQ ID NO: 48

6. LOCUS AF071399 240 bp mRNA EST 01-JUL-1998

DEFINITION AF071399 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone DDRT9A, mRNA sequence.

ACCESSION AF071399

NID g3265144

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 240)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers
 source 1..240
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT9A"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 81 a 28 c 41 g 90 t

ORIGIN

1 mtttttt ttgagactat gaatatmtaa tttagcaagc gaattgttg ttattagata
 61 ggaagcctag aagagtgaag attttaaaa atgtgaggaa ctggtttgt atcagaagc
 121 atataaacgt tgccttaatt tatatatgac gttctctatg aatatagcca aaatgatcga
 181 tattttaat ccaaaaatca aacattttg gtatacgaac ctgccttca cggagggtta
 //

SEQ ID NO: 49

7 LOCUS AF071398 217 bp mRNA EST 01-JUL-1998
 DEFINITION AF071398 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT7, mRNA sequence.

ACCESSION AF071398

NID g3265143

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 217)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
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FEATURES Location/Qualifiers

source 1..217
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT7"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 64 a 38 c 42 g 73 t

ORIGIN

1 mtttttt ttggaggg aaatcacggc ggcggatcga acagtcttct ctcaattggc
 61 aactgtctat atcatccgc aatcacatt cggatgttct cgaaaaggca ttccaaagt

SEQ ID NO: 50

121 attggagtca tgtgaaagag ttctcatga agttaccca aaggcatttc atagtgaatt
 181 aaattgtcaa actagtagtc agatcaataa aattttc

//

8 LOCUS AF071397 219 bp mRNA EST 01-JUL-1998
 DEFINITION AF071397 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT6, mRNA sequence.
 ACCESSION AF071397
 NID g3265142
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 219)
 AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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 JOURNAL Unpublished (1998)
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FEATURES Location/Qualifiers
 source 1..219
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT6"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 75 a 38 c 34 g 72 t
 ORIGIN

1 ttttttt ttgacgaca aattattag aaatattgca taagcgaaaa tacaatttga
 61 cccgtagcaa aaaaatacat gtcgggaaaa tgagaaaaat ggtaataaaa ttttaaaaa
 121 aagtatataa ttctccaac aagctactgc atgtccttgc actacaatct tctccgacgg
 181 attcactct cgatcgcgga ttccgattct tcatgttgg

//

SEQ ID NO: 51

9 LOCUS AF071396 254 bp mRNA EST 01-JUL-1998
 DEFINITION AF071396 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT5, mRNA sequence.
 ACCESSION AF071396
 NID g3265141
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 254)

AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..254
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT5"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 79 a 43 c 50 g 82 t

ORIGIN

1 tttttttt ttttccca tcggaaaata gcaagcctct ccacaggtac agtaattgag
 61 cattggatg atgcttcttc acagcattat ccagtgtata ctatccttt ttcgtaagag
 121 ttgcgaaaa atgtccataa aaagtgtga atgactttg ttcatctega agcatacata
 181 cgatcgaaac ggagaaatcg atagatcgaa tcaggataag tggggatact gtattgtcgg
 241 atgaaaacat agac

//

SEQ ID NO:52

LOCUS AF071394 165 bp mRNA EST 01-JUL-1998
 DEFINITION AF071394 mRNA from cadmium-responsive gene *Caenorhabditis elegans*

cDNA clone DDRT47, mRNA sequence.

ACCESSION AF071394

NID g3265139

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 165)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..165
 /organism="Caenorhabditis elegans"

10

/strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT47"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 38 a 37 c 20 g 70 t

ORIGIN

1 tttttttt ttccaacc ccttcacata ataggcggaa aaccgattgt tgcgttact
 61 tgtgtgtgtg ttattccct gacctatcca tttcccttc ttccaatct ctaaagatar
 121 acctgaaaac gagttttg aatactgat acattgtct tcatac

//

SEQ ID NO: 1

LOCUS AF071393 154 bp mRNA EST 01-JUL-1998
 DEFINITION AF071393 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT41, mRNA sequence.

ACCESSION AF071393

NID g3265138

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 154)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
 differential display

JOURNAL Unpublished (1998)

COMMENT

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 Email: jonf@duke.edu.

FEATURES Location/Qualifiers

source 1..154
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT41"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 49 a 27 c 40 g 38 t

ORIGIN

1 tggattgtgc gggtgtgtact gccaaagtctg gtcgtgatag aaaacatcag gcgatcatgc
 61 cttacgtgg taagatcctg aacgtcgaaa agcaatggaa cataagatct acgaaaatga
 121 ggagatcaaa aacatgttta cagctttgtt ccta

//

SEQ ID NO: 2

LOCUS AF071392 264 bp mRNA EST 01-JUL-1998
 DEFINITION AF071392 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT40, mRNA sequence.

ACCESSION AF071392

NID g3265137

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 264)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

COMMENT

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Email: jonf@duke.edu.

FEATURES Location/Qualifiers

source 1..264
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT40"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 90 a 47 c 59 g 68 t

ORIGIN

1 tggattgtgc ggagtataag caaaaatttc tggaaaagtc ggggtgatag aagtttgata
61 agatcttcaa tcaaaagctc ggtttctgt tgttaaaaga ttccgcagga aaatgtctcc
121 gagagtcctg gtctcctaac taaattctac gaggcgatca aagaatacga gaaaatggag
181 acaccagatg agcgattaac aaaagcacga gaaattatc gatcatcata tacggttgaa
241 ttccgtcgcg caatcgtcac actc

//

SEQ ID NO:3

13

LOCUS AF071391 187 bp mRNA EST 01-JUL-1998

DEFINITION AF071391 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone DDRT4, mRNA sequence.

ACCESSION AF071391

NID g3265136

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 187)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers
source 1..187
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT4"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 57 a 22 c 41 g 67 t

ORIGIN

1 aaattttat taaaataaaa taaacatgtt ttgttgata ttatagcgtt aaagctgaaa
61 tgacaatgat tagaaaacca gcagagaata gagatgatgt tccttcggtt gtgtttcca
121 gtgaacactt gtgcggtgg agcccgat tagcgagtg tagtttga tgtgattgt
181 tccaatc

SEQ ID NO: 4

14 LOCUS AF071389 267 bp mRNA EST 01-JUL-1998
DEFINITION AF071389 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT37, mRNA sequence.

ACCESSION AF071389

NID g3265134

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 267)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
 differential display

JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers
source 1..267
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT37"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 66 a 75 c 54 g 72 t

ORIGIN

1 tggtagctcca cctacaagtt ctacaagttc tacgaggttg tctgatcga tccattccac
61 aaggtatccc gtcgtaaccc agacacccaa tggatcacca agcctagttc acaagcaccg
121 tgagcaaaaga ggactcacct ctgctggacg caagttcgtg gactcggaaa gggattgctt
181 ttctctgcta cccgcggagg atcccaacac caaagttttt ccacccgcca accgataaat
241 cttgtattt tatttggtt tgggttt

//

SEQ ID NO: 5

15.

LOCUS AF071388 292 bp mRNA EST 01-JUL-1998
DEFINITION AF071388 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT36, mRNA sequence.

ACCESSION AF071388

NID g3265133

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 292)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..292
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT36"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 73 a 57 c 51 g 111 t

ORIGIN

1 tttttttt tttcccaac cccctcacat aaaggcggaa aaccgattgt tgcgttact
61 tggtagtttc gttattccc tgaggtatcc atattccgct tctcccaatc tctaaagata
121 taccgaaaa cgagttgtcg tcgaaatact tgatacatgt tgccttcacg ctggtgtatg
181 tggttcgca aattcttcac actagttatg ataggatttg aatgagctgg cagaggtcaa
241 cttgaactc gaatttcaat atttcgtga tctgcatta agtgatgaat aa

//

SEQ ID NO: 6

16.

LOCUS AF071387 314 bp mRNA EST 01-JUL-1998
DEFINITION AF071387 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT35, mRNA sequence.

ACCESSION AF071387

NID g3265132

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 314)
AUTHORS Freedman,J.H. and Liao,H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
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FEATURES Location/Qualifiers
source 1..314
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT35"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 86 a 65 c 56 g 107 t

ORIGIN

1 tctgagctag gaggtccagg aggaacaac ggaggagggtg ctggaaatgg tggattcgac
61 gatttgatg attggctcg ccgttcgaa gaactgaaaa agattaagta atcatcacc
121 gacgttcat tcttataa ctattggtt ctcttcacc caattttt ttacgtgtc
181 ttttttga tcataaatga gacccccaa aactagctgt tcttagtgc atacgttaa
241 accccttag tcattgata tcattgtata cctcatttc cgaaaaacct ttgcacatt
301 atcaactagg tttt

//

SEQ ID NO: 7

17. LOCUS AF071386 189 bp mRNA EST 01-JUL-1998
DEFINITION AF071386 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT34, mRNA sequence.
ACCESSION AF071386
NID g3265131
KEYWORDS EST.
SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 189)
AUTHORS Freedman,J.H. and Liao,H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
COMMENT
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FEATURES Location/Qualifiers
source 1..189
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT34"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 61 a 26 c 48 g 54 t

ORIGIN

1 tctgagctag ggaccgaaat tcacaaatat ccaattgta ctggatggg gggatgtgga
61 cgatttaag gggacaagcc actgaagtgt atgtatttc atcgttaaa tatgaagatg
121 gaggagatg aatggggatt ttgcttctt tgcaaaatgg cctccctatg tacctgaaaa
181 aaaaaaaaa

//

SEQ ID NO: 8

LOCUS AF071385 171 bp mRNA EST 01-JUL-1998
DEFINITION AF071385 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone DDRT33D, mRNA sequence.

ACCESSION AF071385

NID g3265130

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 171)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..171
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT33D"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 57 a 44 c 37 g 33 t

ORIGIN

1 tctgagctag gaaaggacgg agaagatgga gagaacggag ctgctggagc cgctggacca

SEQ ID NO: 9

61 aagggatctt ggcaccactg cccaccacca cgcactcccc aggarattaa ttacttctc
121 tctaatttta gtgaatctca ttctaataaa aagccgcccc aaaaaaaaaa a

//

19 LOCUS AF071383 289 bp mRNA EST 01-JUL-1998
DEFINITION AF071383 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT30, mRNA sequence.

ACCESSION AF071383

NID g3265128

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 289)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..289

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="DDRT30"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 68 a 64 c 63 g 94 t

ORIGIN

1 ttttttt ttgagcgag cgtttattat ttgagtcgag cttgggtga gtcgtcagct

61 gaacatgaag atgacaaag aagacgatca gcagcaacag atgcgcagag tgcattctt

121 tgcgggtgct gtctcaactg cagccgtcat ttcaagcatt gtgactctcc caatgatcta

181 ctcttactct tcaatcttc caatccatt tgatcattgg aaaccgagtt ctgtaaaact

241 gtgctcgtga tatgtggtgt cgaagttctc cacaagtcag gtgtaccct

//

SEQ ID NO:10

20 LOCUS AF071382 162 bp mRNA EST 01-JUL-1998

DEFINITION AF071382 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT3, mRNA sequence.

ACCESSION AF071382

NID g3265127

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 162)

AUTHORS Freedman,J.H. and Liao,H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..162
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT3"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 64 a 31 c 18 g 49 t

ORIGIN

1 ctccaccgca acaagtgttc acgtggaaac aacaacgaaa ggaacatcat ctctatctct
61 gctgggttc taatcangt cattcagct ttaacgctat aatcaacaaa aacagtttat
121 ttattttaa taaaaattta ttctgtcaca aaaaaaaaaa aa

SEQ ID NO: 11

LOCUS AF071381 140 bp mRNA EST 01-JUL-1998

DEFINITION AF071381 mRNA from cadmium-responsive gene *Caenorhabditis elegans*

cDNA clone DDRT29, mRNA sequence.

ACCESSION AF071381

NID g3265126

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 140)

AUTHORS Freedman,J.H. and Liao,H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..140
/organism="Caenorhabditis elegans"
/strain="N2"

21.

/db_xref="taxon:6239"
 /clone="DDRT29"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 52 a 25 c 29 g 34 t

ORIGIN

1 tagggcctgg ttgtgacaat gtgcactaaa atggggcatg aatatcacca gcagagtcca
 61 cttaccctaaa gtgtacttat taagagtcaa ctgtgaagta tatgagacat ttcagttgcc
 121 tgcccaaaaa aaaaaaaaaa

//

SEQ ID NO: 12

22. LOCUS AF071380 308 bp mRNA EST 01-JUL-1998
 DEFINITION AF071380 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT28, mRNA sequence.

ACCESSION AF071380

NID g3265125

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 308)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by
 differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..308

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="DDRT28"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 88 a 70 c 73 g 77 t

ORIGIN

1 tagttaggca caggatgtac gaggaaatc tactatttc gggctcacc acgaaatcac
 61 aataaccggg atttttagt ggtccccgca cgtgaccta ctggcgctc aggcactcgg
 121 ccgcgacatt cgccgacag cctacaatcc acgtgtcaat cgtcagatt gcggatcaat
 181 aatggtgatg aaaggtggaa atacgtatat ggaatcatgt caaaggcatc aagctgaaca
 241 attcgaagag ttgaatggc gtcgacact ttgatccaag accgtaagaa attgaagaac
 301 tattggtg

//

SEQ ID NO: 13

23. LOCUS AF071379 238 bp mRNA EST 01-JUL-1998

17

DEFINITION AF071379 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT26, mRNA sequence.

ACCESSION AF071379

NID g3265124

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 238)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..238

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="DDRT26"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 74 a 43 c 44 g 77 t

ORIGIN

1 mttttttt ttgtgggag gaaatcacgg ctccgatgc aacagtcttc tctcaattgg

61 caactgtctc ttatccattc cgcaatcaca ttccgatgt tctcgaaaag gacttcccaa

121 agttattgga gtactgtgaa agagttcgtc atgaagtta cccaaaggac ttactatgt

181 gaattaaat gtcaactag tagtcagatc aataaaatt tccgcgcgaa aaaaaaaa

//

SEQ ID NO: 14

24. LOCUS AF071378 324 bp mRNA EST 01-JUL-1998

DEFINITION AF071378 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT25A, mRNA sequence.

ACCESSION AF071378

NID g3265123

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 324)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..324
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT25A"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 102 a 70 c 73 g 79 t

ORIGIN

1 tagttaggca caggatgtac gaggaaatc tactatttc gggcttcacc acgaaatcac
61 aataacccgg atttttagt ggtcccccga cgttgaccta ctggcgcggt caggcactcc
121 gccgcgacat tcgccgacac gcctacaatc cacgtgtcaa tcgtcagatt tgcggatcaa
181 taatgggtgat gaaagggtgga aatacgtata tggatcatgt tcaaaggcat caagctgaac
241 aattcgaaga gttgaatcgg cgtcgacaac ttttgatcc aagaccgtaa gaaatttgaa
301 agctattggt gaaaaaaaaa aaaa

//

SEQ ID NO: 15

25. LOCUS AF071377 272 bp mRNA EST 01-JUL-1998
DEFINITION AF071377 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT24, mRNA sequence.
ACCESSION AF071377
NID g3265122
KEYWORDS EST.
SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 272)
AUTHORS Freedman, J.H. and Liao, H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
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FEATURES Location/Qualifiers

source 1..272
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT24"
 /clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 91 a 74 c 51 g 56 t
ORIGIN

1 tggctactcca cgcagaaaga agaaggtcat ccacaacacc gctactaccg atgacaagaa
61 gcttcaaagc aattgaaga aactctctgt caccaacatt ccaggaatcg aggagggtcaa
121 catgattaag acgatggaac cggtatccac tcaacaacc caaaagtcta aactctgtt
181 cccagccaat accttctctg tcacaggatc agccgataac aagtcagatc actgaaatgt
241 ctcccaggga atgctgaact ggctcagagtc ct

SEQ ID NO: 16

LOCUS AF071395 218 bp rRNA INV 30-JUN-1998
DEFINITION Caenorhabditis elegans strain N2 clone DDRT48, rRNA sequence.
ACCESSION AF071395
NID g3265140
KEYWORDS

SOURCE Caenorhabditis elegans.
ORGANISM Caenorhabditis elegans
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 218)
AUTHORS Freedman,J.H. and Liao,H.-C.
TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished
REFERENCE 2 (bases 1 to 218)
AUTHORS Freedman,J.H. and Liao,H.-C.
TITLE Direct Submission
JOURNAL Submitted (09-JUN-1998) Nicholas School of the Environment, Duke
University, Box 90328, Durham, NC 27708-0328, USA

FEATURES Location/Qualifiers
source 1..218
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/tissue_type="whole animal"
/dev_stage="mixed population"
/note="from cadmium-responsive gene"
/clone="DDRT48"
misc_RNA 1..218
/note="similar to Caenorhabditis elegans rDNA tandem
repeats"

BASE COUNT 58 a 58 c 38 g 64 t
ORIGIN

1 tttttttt mtgcagaag cggggactaa aagcaagctt ttcattccacc gatgatataa
61 ggcggttta gtaccttagg atcgactgac ccacatccaa ctactgttcc acgtggaacc
121 cttctccact tcagtcttca aggatcgaac ttgaatatgt gctactacca tacgatctgc
181 actgacggaa agtccagccg agcctacctc atagttaa

SEQ ID NO: 17

LOCUS AF071390 238 bp rRNA INV 30-JUN-1998
DEFINITION Caenorhabditis elegans strain N2 clone DDRT38, rRNA sequence.
ACCESSION AF071390

26

27

NID g3265135

KEYWORDS

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 238)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by differential display

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 238)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Direct Submission

JOURNAL Submitted (09-JUN-1998) Nicholas School of the Environment, Duke

University, Box 90328, Durham, NC 27708-0328, USA

FEATURES Location/Qualifiers

source 1..238

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/tissue_type="whole animal"

/dev_stage="mixed population"

/note="from cadmium-responsive gene"

/clone="DDRT38"

misc_RNA 1..238

/note="similar to *Caenorhabditis elegans* rDNA tandem repeats"

BASE COUNT 58 a 50 c 58 g 72 t

ORIGIN

1 tttttttt ttgtccggg cgggtgttac aaccggcagg gacgtaatca acgtgagctg
61 atgactcgcg ctactaggc attcctcgtt taagggaat aattacaata ccctatcccg
121 gacatggaag aattcaacg gttaccgat accttcaac acgggaaaac tacccgggtg
181 gacaccarta ggactgacag attgaaagtc ttgtcgatt tgggtgttg ttgtcat

//

SEQ ID NO: 18

LOCUS AF071384 253 bp rRNA INV 30-JUN-1998

DEFINITION *Caenorhabditis elegans* strain N2 clone DDRT32, rRNA sequence.

ACCESSION AF071384

NID g3265129

KEYWORDS

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 253)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by differential display

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 253)

AUTHORS Freedman, J.H. and Liao, H.-C.

28

TITLE Direct Submission
 JOURNAL Submitted (09-JUN-1998) Nicholas School of the Environment, Duke
 University, Box 90328, Durham, NC 27708-0328, USA

FEATURES Location/Qualifiers

source 1..253
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /tissue_type="whole animal"
 /dev_stage="mixed population"
 /note="from cadmium-responsive gene"
 /clone="DDRT32"
 misc_RNA 1..253
 /note="similar to Caenorhabditis elegans rDNA tandem
 repeats"

BASE COUNT 45 a 60 c 69 g 79 t

ORIGIN

1 tagggcctgt tgggtgatgc ttgtccggcg cagttctgtc tcttgatac ttgggttga
 61 tggcggacta gtgattgtgc ttctgcgga cgtttctgg tgtgtcrtg gacctcggt
 121 ctagtatcct gatcgctcat ctatcaaccg tactgttaacc ggtacgactc agggatccg
 181 actgtctaataaaacagag gtgacagatg gtcttgcgg acgttaactg tcactgatt
 241 ctccccagtg cac

//

SEQ ID NO: 19

29

LOCUS AF071376 277 bp rRNA INV 30-JUN-1998
 DEFINITION Caenorhabditis elegans strain N2 clone DDRT23, rRNA sequence.

ACCESSION AF071376

NID g3265121

KEYWORDS

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 277)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
 Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished

REFERENCE 2 (bases 1 to 277)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Direct Submission

JOURNAL Submitted (09-JUN-1998) Nicholas School of the Environment, Duke
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FEATURES Location/Qualifiers

source 1..277
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /tissue_type="whole animal"
 /dev_stage="mixed population"
 /note="from cadmium-responsive gene"
 /clone="DDRT23"

misc_RNA 1..277

/note="similar to Caenorhabditis elegans rDNA tandem repeats"

BASE COUNT 67 a 59 c 73 g 78 t
ORIGIN

1 tttttttt ttggggggg gcggtgtga caaagggcag ggacgtaac aacgtgagct
61 gatgactcac acttctaggc attctcgtt taagggaata attacaatac ccatcccgga
121 catggaagaa ttcaacggt ttaccgatac ctttcggca acacgggaaa actcaccggg
181 tccggacacc attaggactg acagattgaa agctctttct cgatttggtg gttggtggtg
241 catggccgtt cttagtgtt ggagtaccaa tcactag

//

SEQ ID NO: 20

30

LOCUS AF071375 216 bp mRNA EST 30-JUN-1998
DEFINITION AF071375 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone VL5, mRNA sequence.

ACCESSION AF071375

NID g3265120

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 216)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.

Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..216

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="VL5"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 69 a 37 c 66 g 44 t

ORIGIN

1 tagcaagtgc ggagacaaat ggaatgcag tggagacaag tgtgtgaga agtactgctg
61 tgaggaggcc agtgagaaaa atgctgtcc agctggatgt aaggagact gcaagtgtgc
121 aaactgtcat tgtgcagagc agaagcagtg cgagacaaga cccatcaaca ccagggaact
181 gctgcggctc attaaatgt ttacagatg aatcta

//

SEQ ID NO: 21

31

LOCUS AF071374 356 bp mRNA EST 30-JUN-1998
DEFINITION AF071374 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone VL9, mRNA sequence.

ACCESSION AF071374

NID g3265119

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 356)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..356

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="VL9"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 126 a 70 c 55 g 105 t

ORIGIN

1 caatcgatga gtatcctcgt acaattaatg catgatgcaa ttggaaatat tccgaggtag
61 gtaaacggg gaacatcacg agatagatga atacagcgga tatcatatag gcacgcagaa
121 tatcaataaa atttcaaat ttcaaaaata tcataacgat tatacacgt agcagggaat
181 ttaaaagcca ctgaaataaa tatagaataa tatatacaga cacacacaat ctgatttca
241 gaacatttc agtaacgacg ttgaacttt ttgaagatt tcgccgagcc ttgatcact
301 ttgcagtc caactccac aactttctt tctctctct cctctacatc gatgc

//

SEQ ID NO: 22

LOCUS AF071373 199 bp mRNA EST 30-JUN-1998

DEFINITION AF071373 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone VL3A, mRNA sequence.

ACCESSION AF071373

NID g3265118

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 199)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

COMMENT

32.

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FEATURES Location/Qualifiers
 source 1..199
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL3A"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 55 a 31 c 20 g 93 t

ORIGIN

1 taaactctat gtttattgt ttttcaaat ttcaaatga aaattgaaac ttcaattg
 61 attagagtct ttgtggttg actcctttt ttcatgaac atctttacg tacgtcatac
 121 ttgtgtatc acattacaa atgttggtt gtaattatat gtaacaaat tctatgtaca
 181 cctcatctca tctctctat

//

SEQ. ID NO: 23

33. LOCUS AF071372 326 bp mRNA EST 30-JUN-1998
 DEFINITION AF071372 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL21A, mRNA sequence.

ACCESSION AF071372

NID g3265117

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 326)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.

Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..326
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL21A"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 76 a 61 c 59 g 130 t

ORIGIN

1 cgtctccctt ttacttac tttaggtgc gtcttgtaa ttgtactac ttatattag
61 caaacctctg gtgtacctc tgcctttg taaaattgt tacacactt cttttggca
121 gtaaaagttg tttagcacac ttaacactc tgcactacc aaggtaatag tgagcccatc
181 gaggtttat aaatgtcctt gatagttaa agtgttgag gatcgagcta ctttgtagt
241 ggaaagccgt gttctgtc ttgttgrt cgtgattt cccaactat tgatattg
301 attaccgga ttataata caccac

//

SEQ ID NO: 24

34

LOCUS AF071371 147 bp mRNA EST 30-JUN-1998
DEFINITION AF071371 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone VL20B, mRNA sequence.

ACCESSION AF071371

NID g3265116

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 147)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..147
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="VL20B"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 54 a 27 c 22 g 44 t

ORIGIN

1 tggcaatata cctagaaga gtaaatatta tgacgtggca ataatacaga agcagtcgga
61 actacaactc acgaacatt ttgaaagtt acctcttgat tcttttgaa tgtttgtct
121 cacacaataa agaaaattct accgtac

//

SEQ ID NO: 25

35

LOCUS AF071370 285 bp mRNA EST 30-JUN-1998
DEFINITION AF071370 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone VL19, mRNA sequence.

ACCESSION AF071370

NID g3265115

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 285)
AUTHORS Freedman, J.H. and Liao, H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
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FEATURES Location/Qualifiers
source 1..285
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="VL19"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 91 a 46 c 52 g 96 t
ORIGIN

1 cgtggcaata cacagaatat acacattgag atggttcgaa tggcaaagag aaggtggtgg
61 ctaatcattc tatatagcac aacgccaaat ataattcga tgtggcggaa ttgtgatgg
121 tgaatggaat taacaaaatt ttctaaacgt ctctattccg agtaatttt cgtttccct
181 ccacttttcg atttatattg ttctttaga aaaagtattt attgcatcgg gtgctcattg
241 tcttgtga gaatataaac tcgttcactt cccaaaaaaa aaaaa

SEQ ID NO: 26

LOCUS AF071369 216 bp mRNA EST 30-JUN-1998
DEFINITION AF071369 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone VL13, mRNA sequence.
ACCESSION AF071369
NID g3265114
KEYWORDS EST.
SOURCE *Caenorhabditis elegans*.
ORGANISM *Caenorhabditis elegans*
Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
REFERENCE 1 (bases 1 to 216)
AUTHORS Freedman, J.H. and Liao, H.-C.
TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display
JOURNAL Unpublished (1998)
COMMENT

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36.

Email: jonf@duke.edu.

FEATURES Location/Qualifiers

source 1..216
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL13"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 69 a 37 c 66 g 44 t

ORIGIN

1 tagcaagtcg gagacaaatg tgaatgcagt ggagacaagt gttgtgagaa gtactgctgt
 61 gaggaggcca gtgagaaaaa atgctgtcca gctggatgta agggagactg caagtgtgca
 121 aactgtcatt gtgcagagca gaagcagtcg ggagacaaga cccatcaaca ccagggaact
 181 gctcgggctc attaaaatgt tcagagttg aatcta

//

SEQ ID NO: 27

LOCUS AF071368 142 bp mRNA EST 30-JUN-1998

DEFINITION AF071368 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL11, mRNA sequence.

ACCESSION AF071368

NID g3265113

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 142)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
 differential display

JOURNAL Unpublished (1998)

COMMENT

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FEATURES Location/Qualifiers

source 1..142
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL11"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 45 a 21 c 23 g 53 t

ORIGIN

1 gtgctggagt tgggtgatt tcagaataaa taaataaaa tatgattga gtagaatatt
 61 aaaataaagt ccttcacatt aaattatcaa tgcctggcc tcgaatatct tccagctggt
 121 gattgcattc gtcattcct tc

SEQ ID NO: 28

//

LOCUS AF071367 84 bp mRNA EST 30-JUN-1998
 DEFINITION AF071367 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL10. mRNA sequence.
 ACCESSION AF071367
 NID g3265112
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 84)
 AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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 JOURNAL Unpublished (1998)
 COMMENT
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 Email: jonf@duke.edu.

FEATURES Location/Qualifiers
 source 1..84
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="VL10"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 29 a 10 c 27 g 18 t

ORIGIN

1 tagcaagtgc ggagacaaat gtgaatgcag tggagacaag tgtgtgaga agtactgctg
 61 tgaggattcc agtgagaaaa aatc

//

SEQ ID NO: 29

39.

LOCUS AF071366 217 bp mRNA EST 30-JUN-1998
 DEFINITION AF071366 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone VL1, mRNA sequence.
 ACCESSION AF071366
 NID g3265111
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 217)
 AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..217
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="VL1"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 69 a 37 c 67 g 44 t

ORIGIN

1 tagcaagtgc ggagacaaat gtgaatgcag tggagacaag tgtgtgaga agtactgctg
61 tgaggaggcc agtgagaaaa aatgctgtcc agctggatgt aaggagact gcaagtgtgc
121 aaactgtcat tgtgcagagc agaagcagtg cggagacaag acccatcaac accagggaac
181 tgctgcggct cattaaaatg ttccagagtt gaatcta

//

SEQ ID NO: 30

40.

LOCUS AF071365 292 bp mRNA EST 30-JUN-1998

DEFINITION AF071365 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT22. mRNA sequence.

ACCESSION AF071365

NID g3265110

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 292)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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FEATURES Location/Qualifiers

source 1..292
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT22"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"

/dev_stage="mixed population"
 BASE COUNT 101 a 60 c 50 g 81 t
 ORIGIN

1 tggctactcca cacggacaaa tacatttagt ttacaagcc gccacgcgac acgcaacgcc
 61 gtaaatctac caaggtacaa caacaacatg tcaagcacag acccatatct tarrtgtgcg
 121 gaacgagatg gcctctactg tagtaatcga caattggact ctatccacc ggarcactta
 181 acctatttg atattaatat tcctattggg atcacagggt ttgcccgaaa atgtaattat
 241 gaactgaatt gaaatgtatt ataaattagt tttattggg aaaaaaaaaa aa

//

SEQ ID NO: 31

41 LOCUS AF071364 188 bp mRNA EST 30-JUN-1998
 DEFINITION AF071364 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT21D, mRNA sequence.

ACCESSION AF071364

NID g3265109

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;

Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 188)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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JOURNAL Unpublished (1998)

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Email: jonf@duke.edu.

FEATURES Location/Qualifiers

source 1..188

/organism="Caenorhabditis elegans"

/strain="N2"

/db_xref="taxon:6239"

/clone="DDRT21D"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 44 a 31 c 51 g 62 t

ORIGIN

1 tatagggttaa gtgatccggt ggataagagt ccaattgtcg attactacag tagaggccat
 61 ctgctccgc acaataaga tatgggtctg tgcttgacat gttgtgttg taccttgggt
 121 agattacgg cagntgcgtg tcgttggcgg ctgtgaaaac taaatgtatt ttccgtgtg
 181 gattacca

//

SEQ ID NO: 32

42. LOCUS AF071363 289 bp mRNA EST 30-JUN-1998
 DEFINITION AF071363 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT20, mRNA sequence.

ACCESSION AF071363

NID g3265108

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.ORGANISM *Caenorhabditis elegans*Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 289)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
differential display

JOURNAL Unpublished (1998)

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Email: jonf@duke.edu.

FEATURES Location/Qualifiers

source 1..289
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT20"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 63 a 56 c 75 g 95 t

ORIGIN

1 tttttttt ttgtacat tatggcaaar ggaggcactg tctggtccg tggggtcatg
61 gtgcattgga tcatgtata tcctatcctg gcttctaate ccaatgcgtt tacagtcag
121 tgggcttgaa cgggcctagc tgagcttga caaagttcct tgacagtacg ggtcgacaag
181 ctgacagtc agaaattagg cactgtggg ctacaggtgc tcgtaattat ttgagagtt
241 ctgggcttcc ggactttac taggctaate taagacaact gggctctaa

//

SEQ ID NO: 33

LOCUS AF071362 214 bp mRNA EST 30-JUN-1998

DEFINITION AF071362 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT2, mRNA sequence.

ACCESSION AF071362

NID g3265107

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.ORGANISM *Caenorhabditis elegans*Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 214)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..214
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT2"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 77 a 37 c 40 g 60 t

ORIGIN

1 aaatcatggc ggcggatgca acagttctct caattggcaa ctgtctatat cattccgcaa
61 cacatttcgg atgtctcga aaaggacttc ccaaagttat tggagtactg tgaaagagtt
121 cgtcatgaag ttcccaaag gactttacta tgtgaattaa attgtcaaac tagtagtcag
181 atcaataaaa tttagctgg aaaaaaaaaa aaaa

//

SEQ ID NO: 34

44.

LOCUS AF071361 322 bp mRNA EST 30-JUN-1998
DEFINITION AF071361 mRNA from cadmium-responsive gene Caenorhabditis elegans
cDNA clone DDRT19, mRNA sequence.

ACCESSION AF071361

NID g3265106

KEYWORDS EST.

SOURCE Caenorhabditis elegans.

ORGANISM Caenorhabditis elegans

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 322)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode Caenorhabditis elegans.
Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..322
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT19"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 102 a 77 c 70 g 73 t

ORIGIN

1 taggtgaccg tagagaagcc cagatatta aaatctaaag ggaaactgtt tgaccagaag

SEQ ID NO: 35

61 attagagccc agttgtctta gatagcctag taaaagtccg gaagcccaga actctcaaaa
 121 taartacgag cacctgtagc ccacaagtgc ctaatttctg actgtcaagc ttgtcgaccc
 181 gtactgtcaa ggaactttgt caagctcagc taggcccggt caagcccaca tgactgtaaa
 241 cgattcggga ttgaagcca ggataggata tccatgatcc aatgcaccat gaccacgga
 301 accagatgtg ctcatcat ag

//

45 LOCUS AF071360 228 bp mRNA EST 30-JUN-1998
 DEFINITION AF071360 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT18, mRNA sequence.

ACCESSION AF071360

NID g3265105

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 228)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..228
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT18"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 70 a 49 c 20 g 89 t

ORIGIN

1 tttttttt ttcccaatt catcacacac tatcargtt tatattcaga cctattacct
 61 gtccagaaaa actgagctga aaaaatcccg gacgagcagc tccttcacat tcaaaatctt
 121 ccatcatctt cccactcaat tcatttgttt tgccttgat ttcaaaatt ttgccttat
 181 tattttattg ctaaaattaag aaaactgtta cttgcacaaa aaaaaaaa

//

SEQ ID NO: 36

46 LOCUS AF071359 255 bp mRNA EST 30-JUN-1998
 DEFINITION AF071359 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT1, mRNA sequence.

ACCESSION AF071359

NID g3265104

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

REFERENCE 1 (bases 1 to 255)

AUTHORS Freedman,J.H. and Liao,H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
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FEATURES Location/Qualifiers

source 1..255
/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT1"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 113 a 25 c 51 g 66 t

ORIGIN

1 atcatcaag aaagctatta tcagaaaaca taaatgacat agatcaagtg taaatcacat
61 atatataaag tggataaata tatatagtta aacggataag gaaattaatt aatgaattt
121 gaaactggca gcgaaggatg aacagggaaa ggcacatgtt aaaataaatg aatgtgtata
181 atttcgtgaa gagttagtta tgttagggtg tggcagccat gcagaatgag ccattgttcc
241 gaaaaaaaaa aaaaa

//

SEQ ID NO: 37

47. LOCUS AF071358 433 bp mRNA EST 30-JUN-1998

DEFINITION AF071358 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT17, mRNA sequence.

ACCESSION AF071358

NID g3265103

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 433)

AUTHORS Freedman,J.H. and Liao,H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers
 source 1..433
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT17"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 149 a 63 c 83 g 138 t
 ORIGIN

1 tggtactaag ggccaataac tgagctttg cacggcggca tcaatgataa agagaaacta
 61 ttttgacgg ttaaataaac caaattaca ccggcgagtc aatcaaaaat tctcatctgg
 121 aacagcaaag tacatcgag aattgctgga aggaagcact gatgaaacta aattaactgc
 181 tggatgcata ggaaaaacgt caagattgac gtggagtgg agagaaggac tatgttga
 241 tggttactaa gatgtgtaa ctggtgacaa taaggacatc acttttctaa ctaactaaa
 301 tcttttta cttctttct tctgaataa ttgtgttta aggcgaattc tatgttcag
 361 aattatta cgttgcctt tcatgttta attgtaaag taagcaattt tccaccgta
 421 aaaaaaaaaa aaa

//

SEQ ID NO: 38

LOCUS AF071357 933 bp mRNA EST 30-JUN-1998
 DEFINITION AF071357 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT16FC. mRNA sequence.

ACCESSION AF071357

NID g3265102

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 933)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
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FEATURES Location/Qualifiers
 source 1..933

/organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT16FC"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 275 a 190 c 171 g 297 t
 ORIGIN

1 cagcatctt tttttt tttttt ctgtctcaag tatgttggat tcatgttga
61 ttattactgc tgcgtggtt ggagccgctg tcatttactt gaaaaatttc ttactgttc
121 ctgacattaa accaaaaacct gatattcaca aaaaagacta caaaaaggat gtagttatc
181 tgtatcagat gaagagactc aagaactgtc cgaactgtc cctttctgc atgaaaatcg
241 agattcttg tagaatctc aagattctt acgagattat cacatgcacc tctgaacgt
301 ctgggaatgg atgtgtccct ttcttgaac tcaatggaga gcacatgtc gattctgac
361 ttatcgaat gcgttgaga tcacattt aaattccgtc gtttccaact gagctggaaa
421 ctcaatctgt tctctaaagc aagttgcag atcaccattt gtcttctga ttatagat
481 ttaaaattgc tctgacgaa ttctacaaa ccattatcga aataatcggc ctcccaact
541 tcttgaatt ccttctatg ccccttga aggtataat cgggaaaaat gtctacaaca
601 aatgtcaggg agccattgga gatttgaat tgagtgtgct cgacgagatt ctacacagag
661 atttgcgaat cgtagagaac accttgcca agaaaaagt tcttctggg gaggaaatca
721 cggcggcgga tgcaacagtc ttcttcaat tggcaactgt ttattatcca ttccgcaatc
781 acattcggga ttttctgaa aaggacttcc caaagtattt ggagtactgt gaaagagttc
841 gtcatgaagt ttcccaaag gactttacta tgtgaattaa attgtcaaac tagtagtcag
901 atcaataaaa ttctacgtgg caaaaaaaaa aaa

SEQ ID NO: 39

//

49. LOCUS AF071356 238 bp mRNA EST 30-JUN-1998
DEFINITION AF071356 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
cDNA clone DDRT16. mRNA sequence.

ACCESSION AF071356

NID g3265101

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 238)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..238

/organism="Caenorhabditis elegans"
/strain="N2"
/db_xref="taxon:6239"
/clone="DDRT16"
/clone_lib="mRNA from cadmium-responsive gene"
/tissue_type="whole animal"
/dev_stage="mixed population"

BASE COUNT 77 a 42 c 45 g 74 t

ORIGIN

1 tttttt ttgggagga aatcacggcg gcggatgcaa cagtcttc tcaattggca
61 actgtctatt atccattccg caatcacatt tggatgttc tggaaaagga ctcccaaag
121 ttattggagt actgtgaaag agttcgtcat gaagttacc caaaggactt tactatgtga

SEQ ID NO: 40

181 attaaatgt caaactagta gtcagatcaa taaaattcta cgtggcaaaa aaaaaaaa

//

LOCUS AF071355 248 bp mRNA EST 30-JUN-1998
 DEFINITION AF071355 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT15, mRNA sequence.
 ACCESSION AF071355
 NID g3265100
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 248)
 AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers
 source 1..248
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT15"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 67 a 46 c 31 g 104 t

ORIGIN

1 ttttttt ttgcgatgt tgtaatacta atatttata atttttta attttcttg
 61 ttaagtttg atttataggt tttgagatt ttttgccctg taatttgca actgtgattc
 121 atgtatgtac tatatgaacc gaaacccctt cccgtcatac acaacagta gtaaacatt
 181 ttaatcccat attttcatt cccaacactc ttacagggtt tgcatacagca gcagcagtc
 241 aaacacaa

//

LOCUS AF071354 226 bp mRNA EST 30-JUN-1998
 DEFINITION AF071354 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT12, mRNA sequence.
 ACCESSION AF071354
 NID g3265099
 KEYWORDS EST.
 SOURCE *Caenorhabditis elegans*.
 ORGANISM *Caenorhabditis elegans*
 Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.
 REFERENCE 1 (bases 1 to 226)

SEQ ID NO: 41

AUTHORS Freedman, J.H. and Liao, H.-C.
 TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..226
 /organism="Caenorhabditis elegans"
 /strain="N2"
 /db_xref="taxon:6239"
 /clone="DDRT12"
 /clone_lib="mRNA from cadmium-responsive gene"
 /tissue_type="whole animal"
 /dev_stage="mixed population"

BASE COUNT 68 a 38 c 35 g 85 t

ORIGIN

1 tttttttt ttgtgaaca aagaactgag cactctatgg ttatcaagt cratatgtat
 61 ccgtgatgcc tactgtatcg tacatccatc tcgatcgtaa tgcattatg atcatgagtt
 121 cccaaaggtc ttaatctga caaagggtga atagatatat atccttatt ggcactatat
 181 atatgttcag aattatgact gatcgatata targatcaaa gttaca

//

SEQ ID NO: 42

LOCUS AF071353 212 bp mRNA EST 30-JUN-1998
 DEFINITION AF071353 mRNA from cadmium-responsive gene *Caenorhabditis elegans*
 cDNA clone DDRT10. mRNA sequence.

ACCESSION AF071353

NID g3265098

KEYWORDS EST.

SOURCE *Caenorhabditis elegans*.

ORGANISM *Caenorhabditis elegans*

Eukaryota; Metazoa; Nematoda; Secernentea; Rhabditia; Rhabditida;
 Rhabditina; Rhabditoidea; Rhabditidae; Peloderinae; *Caenorhabditis*.

REFERENCE 1 (bases 1 to 212)

AUTHORS Freedman, J.H. and Liao, H.-C.

TITLE Cadmium-Regulated Genes from the Nematode *Caenorhabditis elegans*.
 Identification and cloning of new cadmium-responsive genes by
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FEATURES Location/Qualifiers

source 1..212
 /organism="Caenorhabditis elegans"
 /strain="N2"

7

/db_xref="taxon:6239"

/clone="DDRT10"

/clone_lib="mRNA from cadmium-responsive gene"

/tissue_type="whole animal"

/dev_stage="mixed population"

BASE COUNT 68 a 35 c 34 g 75 t

ORIGIN

1 ttgatacag gaactacatt tacatctgtt tcaacatata aacaatacat aacatactca
61 atccttcagg ctctgaagga ttgtgagtc gatatactgt aacaagctcg ggaaacataa
121 gtacatttt tggagctatc ttttatgtt gcgctttct ttgtctctt tgaatgagtt
181 ttgaaatgaa ttgtctgtgc aaaaaaaaaa aa

//

SEQ ID NO: 43